PhD Degree Requirements

Students admitted to the university as a graduate student must complete additional requirements to become a PhD candidate. Students have two options for PhD.

(1) **Master's Degree** (in Engineering or a related field of study) **To PhD**
(2) **Bachelor's Degree** (in Engineering or a related field of study) **To Direct PhD**

**MASTER'S DEGREE TO PhD OPTION (24 semester credit hours beyond MS degree)**
- At least 15 of the semester credit hours must be PGE courses
- Exception: Students who already have an MS degree in petroleum engineering from an accredited US or Canadian university can reduce the PhD course requirements from 24 hours to 12 semester hours. The majority of the courses must be taken within the PGE department.
- Remaining semester credit hours can be PGE graduate courses or approved Science or Engineering courses
- Non-technical courses are not approved.
- 3 of the 5 basic core courses for the MS degree can be taken as preparation for the written PhD qualifying examination.
- All courses must be taken for a letter grade and supervising committee (research advisor) may require additional courses

**BACHELOR'S DEGREE TO DIRECT PhD OPTION (36 semester credit hours)**
- Same as No Thesis No Report for MS degree option
- Students will not receive an MS degree - Students will only receive a PhD degree at the completion of all the requirements

**ADDITIONAL PhD REQUIREMENTS FOR BOTH PhD OPTIONS:**
- Students are responsible for satisfying the background course requirements in the academic program they submit.
- Undergraduate courses taken in fulfilment of background courses will not count towards the PhD degree.
- Graduate courses taken as background courses can count towards the PhD degree, with approval from the Graduate Advisor.
- The academic program must be approved by the GSC, although the coursework does not have to be completed to apply to candidacy.
- A student must maintain a minimum 3.5 GPA for all courses taken at UT Austin while in the PhD program.
PhD TO DO LIST:

SELECT A DISSERTATION TOPIC
- One or more PGE faculty members will supervise the research.
- Select a supervising committee with GSC approval. A committee will have 5 members. At least 3 members are PGE faculty on the GSC (Graduate Studies Committee). 1 member must be from outside the GSC and can be outside UT. The 5th member can be a non-GSC PGE faculty or faculty from another UT department. However, 4 PGE faculty are preferred.

PASS WRITTEN PhD QUALIFYING EXAMS
- Exams consist of several parts, covering topics that the graduate faculty may change from time to time.
- Current topics are Mathematical Analysis, Petrophysics and Flow in Porous Media, Transport Phenomena, and Analytical Writing.
- New PhD students (those with an MS degree from anywhere other than UT PGE Department) who are eligible must take the exams the first time they are offered after being in residence.
- Continuing PGE students (those obtaining an MS degree from UT Austin) must take the exams the first time they are offered after completion of the MS degree.
- Students must choose and pass 3 of the 4 written exams in no more than two attempts to be considered for PhD candidacy.
- If a PhD aspirant fails any of the 3 chosen exams of the PhD qualifying exams, that part must be retaken the next time the exams are offered.

PASS AN ORAL PhD RESEARCH PROPOSAL EXAMINATION
- The exam is conducted by the student’s PhD supervising committee.
- There will be an oral discussion of the proposed dissertation research to determine the student’s grasp of the research problem and to assess future goals. It is not necessary to have made significant progress toward a solution of the research problem in order to present the research proposal.
- A PhD aspirant must complete this research proposal exam no later than 30 months from the date he/she entered the PhD PGE graduate program and after successful completion of the PhD written qualifying exams. Students who have conditionally passed the qualifying exams must also take the oral exam within this time frame. Students who do not complete the exams by this date will be required to retake the PhD written qualifying exams. Any failure on the re-qualification exams will result in dismissal from the PGE graduate program.
- A PhD aspirant must prepare a written dissertation proposal (no more than 20 single-spaced pages including appendices). Submit copies to the committee members at least one week before the oral presentation is made. The student should consult with his/her supervising professor(s) about the detailed content of the proposal, but the proposal should not be significantly edited by the advisor. This is an exam.
- The presentation should be clear, concise, well thought-out and no longer than 30 minutes. Following the presentation, the committee will pose up to (but no more than) one hour of questions to the student. The entire exam should not take more than one and half hours.
- During the exam, committee members will suggest courses of action and make known their own expectations. A PhD aspirant must bring to the oral exam a completed departmental form (obtained from the Graduate Coordinator) that lists the coursework taken and grades achieved. After the exam, the signed original departmental form must be returned to the Graduate Office so that it can be kept on file. The committee decides if the student has passed the research proposal exam and makes recommendations to the student regarding additional coursework, if any, which should be taken. Options are pass, no pass, and fail. A no pass requires another oral exam. A PhD aspirant will be allowed two chances to pass the oral exam, but the exam must be retaken within three months.

**APPLY TO PhD CANDIDACY**

- In order to be “advanced to candidacy”, the PhD student must go online and submit their Application for Candidacy to the Graduate School. The student must present his/her course plan for the PhD degree to the Graduate Coordinator, including background course requirements. The student should see the Graduate Coordinator or Graduate Advisor, if assistance is needed.

**AFTER APPROVAL OF PhD CANDIDACY, REGISTER FOR DISSERTATION COURSES**

- A PhD student should register for dissertation courses ending in “R” (PGE 399R, PGE 699R, PGE 999R) during the first semester of candidacy.
- After taking the “R” course, a PhD student should register for dissertation courses ending in “W” (PGE 399W, PGE 699W, PGE 999W) every fall or spring semester until graduation.

**SCHEDULE FINAL ORAL EXAMINATION (DISSERTATION DEFENSE)**

- Once a student’s dissertation is nearing completion, it’s time to schedule the defense – the final oral examination.
- A PhD student should do the following things: (1) Make arrangements for the defense at the beginning of the semester (especially during the summer) in order to accommodate the travel plans of the committee members (2) Choose a date and time that the committee members can attend (3) Contact PGE 2nd floor front desk staff in CPE 2.502 regarding available rooms for the selected final oral exam date (4) Schedule the final oral exam with the Graduate School at least two weeks prior to the exam date by completing the online “Request for Final Oral Examination form” found on the Graduate School’s website (5) Email the final oral exam information (date, time, location, dissertation abstract) to the Graduate Coordinator within 2 days of completing the Graduate School’s final oral exam form. The Graduate Coordinator will send an email invitation to PGE faculty and graduate students plus post flyers regarding the final oral exam.